

The National Big Data R&D Initiative

Vision and Actions to be Taken

The following represents a preliminary, draft vision statement and possible actions to be taken as formulated by federal agencies participating in the Networking and Information Technology R&D Program Big Data Senior Steering Group (BDSSG) with input from external stakeholders. This framework outlines a vision and how agencies might move forward achieving this vision, both separately and collaboratively. Within these two thrusts, BDSSG agencies have identified some areas of high interest and potential impact.

VISION STATEMENT: We envision a Big Data innovation ecosystem in which the ability to analyze, extract information from, and make decisions and discoveries based upon large, diverse, and real-time datasets enables new capabilities for Federal agencies and the nation at large; accelerates the process of scientific discovery and innovation; leads to new fields of research and new areas of inquiry that would otherwise be impossible; educates the next generation of 21st century scientists and engineers; and promotes new economic growth. To this end, the NITRD agencies should consider how to most effectively:

- Create next generation capabilities by leveraging emerging Big Data foundations, technologies, processes, and policies
- In addition to supporting the R&D necessary to create knowledge from data, emphasize support of R&D to understand trustworthiness of data and resulting knowledge, and to make better decisions and breakthrough discoveries and take confident action based on them
- Build and expand access to the Big Data resources and cyberinfrastructure-- both domain specific and shared-- that are needed for agencies to best achieve their mission goals and for the country to innovate and benefit
- Improve the national landscape for Big Data education and training to fulfill increasing demand for both analytical talent and capacity for the broader workforce

The agencies will consider how to create new and enhance existing connections in the current national Big Data innovation ecosystem by, for example:

- Fostering the creation of new partnerships that cross sectors and domains
- Creating new gateways that enable the interconnection and interplay of Big Data ideas and capabilities across agency missions
- Ensuring the long term sustainability, access, and development of high value datasets and data resources